C. dussumieri in which the pearly spots have become indistinct or have disappeared could be easily mistaken for *C. neglecta*.

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12. SOME SOIL ARTHROPODS COLLECTED FROM PADDY FIELDS AT VARANASI

Very little is known about the mesofauna of Indian soil. The present paper is the result of a quantitative investigation of the mesofauna collected from the paddy fields under drought conditions during September to November, 1966. Soil moisture, soil temperature, and percentage of organic matter was also recorded during the period of investigation.

The sampling plots were located on the Agriculture farm of the Faculty of Agriculture, Banaras Hindu University. Two plots of the size 12 × 12 m were selected and total of 32 soil samples (16 from each plot) were taken during the period of study up to the depth of 22·5 cm at randomized cores with a sampling unit 7·5 × 10 × 22·5 cm in size. Soil was carried to the laboratory in polythene bags. All the soil samples were processed in the Ladell Apparatus (Ladell 1936) by flotation method. The fauna collected and stored in glycerated 70% alcohol, were examined by using a binocular microscope. Oudman's fluid, Diaphane, DPX and Canada balsam were employed as mountant, Lacto-

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phenol and Xylol were used as clearing media. On each sampling date additional soil samples were taken from both the plots, from which the percentage of moisture content was estimated by the loss of weight on drying, organic carbon was estimated by diphenylamine method and organic matter by multiplying the organic carbon with arbitrary factor 1·724. Soil temperature were recorded at the time of soil sampling from both the plots at the depth of 11·5 cm using mercury-in-glass thermometer.

Table I shows that a much higher population of soil arthropods was recorded in Plot I (Paddy field with succulent growth) than in Plot II (Paddy field with fairly advanced growth). Under drought conditions it seems that soil arthropods thrive better in the soil comparatively rich in organic content, and high moisture with low temperature. The

TABLE I

COMPARISON OF NUMBERS OF SOIL ARTHROPODS FROM THE TWO PADDY PLOTS

Soil arthropods	Plot I Paddy field with succulent growth	Plot II Paddy field with fairly advanced growth	Total
Collembola ..	362	201	563
Acarina ..	1113	817	1930
Pauropods ..	80	33	113
Other soil arthropods ..	57	42	99
Total ..	1612	1093	2705
No. of samples ..	16	16	32
Population/sample ..	100·75	68·31	84·53
Moisture content % ..	5·94	5·04	
Temperature °C ..	26·43	27·28	
Organic matter % ..	0·775	0·647	

mites (Acarina) preferred dry and poor soil, whereas Collembola and Pauropods were found more in rich and moist soil (Table II). Total number of 2705 soil arthropods was collected in 32 samples, of which Acarina were more than 71%.

TABLE II

MEAN PERCENTAGE OF COLLEMBOLA, ACARINA, PAUROPODS AND OTHER SOIL ARTHROPODS PER SAMPLE IN THE TWO PLOTS

Soil arthropods	Plot I	Plot II
Total No. of samples ..	16	16
Collembola ..	22·46	18·39
Acarina ..	69·05	74·75
Pauropods ..	4·96	3·02
Other soil arthropods ..	3·53	3·84

Among the 28 identified specimens, the 12 Collembola, 11 Acarina and 5 other soil arthropods, collected from the paddy fields are listed in the Appendix.

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Appendix

COLLEMBOLA :

Onychiurus armatus Tulb.
Sminthurus viridis annulatus Folsom
Isotoma viridis Bourlet
Isotomina thermophila Axelson
Isotomina pontica Stach
Isotoma pinnate fasciata Borner
Isotomurus palustria Muller
Folsomia fimltaris Linn.
Folsomides parvulus Stach
Entomobrya santeris Borner
Neanura muscorum Templeton
Seira biformis Mitra

ACARINA :

Typhlodromus sp.
Coccotydeus sp.
Microtrombidium hystricinum
Allothrombium australiense Hirst
Cunaxa setirostris Hermann
Scheloribates sp.
Epilohmannia cylindrica Berlese
Epilohmannia pallida pacifica Aoki
Parasitus consanguineus Oudemans & Voigts
Gamasiphis (Neogamasiphis) bengalensis Battacharya
Oppia sp.

MISCELLANEOUS :

Tailless whip scorpion
Trithyreus sp.
Japyx sp.
Symphyla
Scutigerella sp.
Scolopendrella sp.
Pauropoda
Pauropus sp.